Indiana Water Pollution Control Board Adopts Statewide Antidegradation Rule

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On March 14, 2012, the Indiana Water Pollution Control Board (WPCB) for the first time adopted rules establishing antidegradation standards and implementation procedures applicable to waters of the entire state. The new antidegradation rule, if approved by the U.S. Environmental Protection Agency (EPA), would replace an existing antidegradation rule applicable only to waters of the Great Lakes basin that has been in place since 1997.

This rulemaking will be one of the most significant actions ever undertaken by the WPCB since it may be anticipated to greatly expand administrative deliberation and decision making to activities affecting Indiana waters with minor, even nearly imperceptible, environmental impacts as well as to those with potentially substantial impacts, and to pose potentially grave ramifications for the state's economy. As will be seen, decision making by the IDEM Commissioner to implement the Rule is quite discretionary and subjective. At a time when such an effect can be ill-afforded, the rule augurs the placing of an invisible brake on economic development within the state – not only by the inherent scheme of the rule for "balancing" between economic development and preservation of the state's reservoir of high environmental quality waters but, of even greater concern, through the uncertainty posed by vaguely formulated decisional criteria subject to broad administrative discretion.

This article briefly describes the principal elements of the new antidegradation rule (the "Rule"),[1] to be codified as 327 IAC 2-1.3, including its scope of applicability, the antidegradation standards for different categories of waters, exemptions from the rule's requirements, the requisite content of antidegradation demonstrations to justify proposed actions that would result in a lowering of water quality, procedures and decisional criteria by which the Commissioner of the Indiana Department of Environmental Management (IDEM) will approve or deny proposed actions subject to the rule, and, finally, special provisions that apply to actions that would affect the quality of Outstanding State Resource Waters (OSRWs).

Scope of the Rule's Applicability

According to Section 1, the antidegradation standards of the Rule apply to all surface waters of Indiana and the Rule's antidegradation implementation procedures apply to any "proposed new or increased loading of a regulated pollutant to surface waters of the state from a deliberate activity subject to the Clean Water Act, including a change in process or operation that will result in a significant lowering of water quality."

Understanding the scope of applicability of the Rule's implementation procedures depends on two newly defined terms: "regulated pollutant" and "significant lowering". "Regulated pollutant" is somewhat cryptically defined in Section 2 of the Rule as "a parameter of a pollutant [as pollutant is defined in the Clean Water Act]" for which water quality criteria, including either narrative or numeric criteria, have been adopted in or pursuant to Indiana water quality standards or which may be subject

[1] The text of the Rule, as finally adopted by the WPCB, can be accessed at http://www.in.gov/idem/5387.htm where it is identified as "Proposed Rule as Preliminarily Adopted with IDEM's Suggested Changes (PDF)." The preliminarily adopted rule is also identified by Legislative Services Agency as LSA Document #08-764.

to limitation in an NPDES permit. A particularly troubling aspect of this term is the vagueness introduced by narrative water quality criteria, most of which are quite subjective in nature. A "significant lowering of water quality" is defined as occurring when a new or increased loading of a regulated pollutant to a surface water results in an increase in the ambient concentration of the pollutant and is greater than a *de minimis* lowering of water quality. Since virtually any increase in loading of a pollutant will cause an increase in ambient concentration, the *de minimis* aspect of the definition is controlling. An unanswered question is what is the *de minimis* level, for purposes of a significant lowering, for those pollutants for which no express *de minimis* level is prescribed by the Rule.

Finally, the Rule provides that general NPDES permits will be subject to an antidegradation review. However, once that review of a general permit is complete, the coverage of future specific activities under the general permit will not be subject to antidegradation review.

Antidegradation Standards

Section 3 of the Rule establishes four different antidegradation standards corresponding to four categories of increasingly higher valued waters. The Tier 1 standard is the least restrictive and has two components, one that applies generally to all surface waters, requiring that all existing uses shall be maintained and protected, and another that applies to waters where existing uses are impaired, prohibiting any lowering of water quality regarding the pollutants that are causing the impairment.

A Tier 2 standard applies to high quality waters (HQWs), which are defined as waters whose existing quality for a particular parameter is better than the water quality criterion for that parameter. Simplifying somewhat, the Tier 2 standard requires that the high quality of such a water shall be maintained and protected unless the IDEM Commissioner finds that allowing a significant lowering of water quality is necessary and accommodates important social or economic development in the area where the waters are located.

Next, Tier 2.9 standards are prescribed for outstanding state resource waters and provide, to varying degrees, a higher level of protection depending on the pollutant at issue and whether the waters are inside or outside the Great Lakes basin. No new or increased loading of a bioaccumulative chemical of concern (BCC), except mercury, is permitted to an OSRW within the Great Lakes basin. For mercury and non-BCCs in OSRWs within the Great Lakes basin and for all pollutants in OSRWs outside the Great Lakes basin for which a new or increased loading is proposed that would result in a significant lowering of water quality, the standard has two elements: an antidegradation demonstration must be approved and a water quality improvement project must be implemented or funded that results in an overall improvement in water quality within the OSRW.

Finally, a Tier 3 standard is established for HQWs that are outstanding national resource waters (ONRWs) and requires that such waters shall be maintained and protected in their present high quality without degradation except for short-term, temporary loadings. No Indiana waters have been designated as ONRWs.

Exemptions from the Rule

Certain exemptions from the antidegradation demonstration requirements of the Rule are available, depending on the designation of the water (i.e, HQW, OSRW, or ONRW) and the type of

proposed activity and the associated new or increased pollutant loading. These are discussed in Section 4 of the Rule.

For an OSRW or ONRW within the Great Lakes basin, new or increased loadings of mercury or non-BCCs can be approved by the IDEM without submittal of an antidegradation demonstration or compliance with the water quality improvement project requirements of Section 7 if the loading and associated degradation cannot be prevented by reasonable methods, will be of short duration (less than 12 months), and the degradation meets applicable standards of Section 3. A similar exemption is available for short term loadings to HQWs within the Great Lakes basin that are not an OSRW or ORNW and apparently is not limited to loadings of mercury or non-BCCs.

The exceptions provided under Subsection (c) regarding HQWs other than ONRWs are likely to draw the greatest attention for possible applicability. One such exception deals with proposed loadings that would result in a *de minimis* lowering of water quality. Another addresses essentially *de minimis* increases in heat loading to waters.

(i) A *de minimis* lowering of water quality is a concept available only in the context of increased loadings of non-BCCs and is characterized by the following elements:

(a) To be *de minimis* the proposed net increase in loading of a regulated pollutant must be less than or equal to 10% of the available loading capacity ("ALC") of the water at the time of the proposed increase in loading. In addition, the ALC must be updated at the time of each subsequent request for a new or increased loading to the water;
(b) At the time of the request for the initial increase in loading of a pollutant to a water, a "benchmark ALC must be determined;
(c) For every subsequent request for additional increases in loading to a water, the ALC remaining after the net increase in loading to result from the request must be greater than or equal to the benchmark ALC for the proposed loading increase to be *de minimis*.

(ii) New or increased loadings of heat to waters other than Lake Michigan are exempt if they will not produce a rise in temperature outside a designated mixing zone and, in the case of a stream will not cause a temperature rise of more than one degree Fahrenheit if it is assumed that the waste heat in the proposed loading is evenly distributed within the stream design flow;

(iii) New or increased loadings of heat to Lake Michigan are exempt only if the loading will not cause an increase in temperature at the edge of a 1,000-foot arc inscribed from the point at which the heat loading would be introduced and will not exceed 0.5 billion BTUs per hour.

In addition, an exemption is provided for new or increased loadings resulting from four types of limited circumstances affecting HQWs that are not ONRWs. These include, e.g., changes occurring (i) within the existing, permitted capacity and processes at a facility, (ii) a bypass that is not prohibited, or (iii) from a POTW that increases sewer service area without changes to a discharge permit or treatment facilities.

Antidegradation Demonstrations

Pursuant to Section 5(a) of the Rule, any proposed new or increased loading to a water that would cause a lowering of water quality that is not exempt under Section 4 must receive a

determination by the IDEM Commissioner that the proposed loading is both necessary and accommodates important social or economic development in the area at which the proposed loading would occur. To seek such a determination from IDEM, the person proposing the new or increased loading must submit an antidegradation demonstration containing the information specified under Section 5 of the Rule.

Subsection (a) identifies "**basic information**" to be provided in all antidegradation demonstrations, including the identity, mass amount, and concentration of all regulated pollutants in the proposed new or increased loading, the location of the proposed loading to the affected water, and the physical, biological and chemical conditions of the receiving water.

Where a proposed new or increased loading would result from one of **six categories of "beneficial activities**" listed in Subsection (b) and is not exempt under Section 4, the antidegradation demonstration must include the basic information of Subsection (a) and the "necessary" information specified by Subsection (c). Some examples of these beneficial activities include new or increased pollutant loadings resulting from a CERCLA response action or a RCRA corrective action, a LUST corrective action, approval of a non-BCC water treatment additive, or connection of residences with failing septic systems to a wastewater treatment plant. These activities were exempt under the former antidegradation rule for waters of the Great Lakes basin.

Subsection (c) describes the "**necessary" information** to be included in an antidegradation demonstration for new or increased loadings related to the activities addressed in Subsections (b) [formerly exempt beneficial activities], (d) [certain beneficial activities relating to treatment of wastewater or treatment of air pollutants], or (f) [any activity that is not exempt and not one of the beneficial activities of Subsection (b) or (d). In this context, "necessary" refers to the circumstance in which no reasonable alternative is available in lieu of the discharge of the proposed new or increased loading. This "necessary" quality is demonstrated through the following information: (i) an assessment of the availability, reliability, cost-effectiveness and technical feasibility of prevention or mitigation of the degradation through possible alternative degradation mitigation techniques; (ii) an analysis of the loading reduction benefits and water quality benefits associated with the mitigation techniques, including alternative pollution prevention techniques; (iv)a review of the availability, cost-effectiveness and technical feasibility of regional sewage collection and treatment facilities; and (v) a review of the availability, cost-effectiveness and technical feasibility of discharging to another waterbody with less severe degradation impacts.

Subsection (d) describes the essential elements of an antidegradation demonstration for any proposed activity producing a new or increased loading to result in a significant lowering of water quality that is not exempt where the new or increased loading is beneficial because it is necessary to accomplish a reduction in: either (i) the loading of another, more toxic or more bioaccumulative pollutant or (ii)the release of one or more air pollutants necessary to meet an air quality standard or emission requirement or reduce human exposure to hazardous air pollutants. The demonstration for such an activity is to include: (1) the basic information of Subsection (a); (2) the "necessary" information of Subsection (c); and (3) alternatives analysis information under Subsection (e).

Subsection (e) describes the **alternatives analyses** required to be included in antidegradation demonstrations for proposed new or increased loadings of a regulated pollutant from an activity included in Subsection (d) or (f). The required information consists of: either (i) an accepted effluent limit based on best available demonstrated control technology; or (ii) a discussion of the alternative or

enhanced treatment technique selected to mitigate the impact of the new or increased loading, including an explanation of the rationale for the selection and of the operational reliability of the selected alternative.

Subsection (f) describes the required elements of an antidegradation demonstration for any activity that is neither exempt nor a beneficial activity and that causes a new or increased loading resulting in a significant lowering of water quality. The demonstration for such an activity is to include: (1) the basic information of Subsection (a); (2) the "necessary" information of Subsection (c); (3) alternatives analysis information under Subsection (e); and (4) social and economic analysis information from Subsection (g).

The **social and economic analysis** information specified by Subsection (g) include: (i) anticipated impact of the lowering of water quality on aquatic life and wildlife and on human health; (ii) whether the lowering of water quality will affect ONRWs, OSRWs or parks, preserves or wildlife areas; (iii) the extent to which the impacted resources are unique or rare within the locality or state; and (iv) anticipated impact on 14 particular social or economic impact factors, as well as a demonstration that the identified impacts are necessary to accommodate important social or economic development.

Procedures and Criteria for Antidegradation Determinations

Procedures for addressing a request for approval of a new or increased loading remain similar to that prevailing under 327 IAC 5-2-11.2 and now obsolesced 327 IAC 5-2-11.3. When IDEM receives an antidegradation demonstration to support approval of a loading, IDEM will provide public notice of the submittal and request comment. A public meeting on the antidegradation demonstration will be conducted by IDEM under certain circumstances. Once IDEM's Commissioner makes a tentative decision on an antidegradation demonstration, IDEM will give public notice of the tentative determination which summarizes the determinative factors relied upon by the Commissioner and, if the tentative decision is to approve the requested loading, the tentative determination will be incorporated into a draft NPDES permit for public comment. A final action by the Commissioner on the antidegradation demonstration will occur concurrently with the final agency action on the proposed NPDES permit.

The ultimate showing that must be made to the IDEM Commissioner for approval of an antidegradation demonstration will depend upon the type of demonstration required under Section 5 of the Rule. For example, if the proposed new or increased loading will result from a beneficial activity of the sort described in Subsection 5(c), the proponent will need to demonstrate only that the new or increased loading is "necessary". That such a proposal accommodates important social or economic development is to be inferred from the "beneficial" quality of the proposal under the Rule. If a proposed new or increased loading instead is one of the beneficial activities described in Subsection 5(d), the antidegradation demonstration must include not only the "necessary" showing but also the "alternatives analysis" prescribed by the Rule. Finally, if a proposed new or increased loading is not associated with one of the beneficial categories in Subsection 5(c) or (d), then the demonstration will need to satisfy the "necessary" criterion and the alternatives analysis but also will have to establish that the project will accommodate an important social or economic development.

Decisional criteria for the IDEM Commissioner's determination on a request for a new or increased loading that would significantly lower water quality are provided in Subsections (d) and (e) of

Section 6. The Commissioner may deny some or all of a request if any of the following three criteria are found to exist:

(i) The activity that would cause the lowering of water quality is not necessary because cost-effective measures that would prevent or minimize the proposed lowering of water quality are reasonably available but the [proponent] has chosen not to implement those measures.
(ii) The activity that would cause the lowering of water quality does not accommodate important social or economic development in the area.
(iii) The activity that would cause the lowering of water quality would jeopardize endangered or threatened species.

Conversely, the IDEM Commissioner may approve some or all of a request for a new or increased loading if the procedural elements are met and the Commissioner determines that the lowering of water quality as a result of the proposed activity is necessary and accommodates important social or economic development in the area in which the receiving waters is located.

Importantly, the Rule provides in Section 6(a) that the IDEM Commissioner, in reaching a decision on an antidegradation demonstration, must (i) give "substantial weight" to any "applicable determinations by governmental agencies" and (ii) "may rely on consideration of any one (1) or a combination of the factors listed in section 5(g)(5) of this rule."

Clearly, the IDEM Commissioner is vested with considerable discretion in making determinations on requests for approval of new or increased loadings of pollutants to Indiana waters.

Unique Procedures for Outstanding State Resource Waters

Under the Tier 2.9 antidegradation standard of Section 3(c)(3) of the Rule, a person proposing an action that would result in a significant lowering of water quality in an OSRW must, in addition to obtaining approval of an antidegradation demonstration, either implement or fund a water quality improvement project in the watershed of the OSRW. Section 7 of the Rule provides procedures and substantive criteria for preparing the description of a project for submittal to IDEM demonstrating that the project will result in an overall improvement in water quality in the OSRW, taking into account the proposed action that by itself would result in a significant lowering of water quality. If a project proponent prefers to fund such a project rather than directly perform one, IDEM will determine the amount of the project fee to be paid, based on specific criteria. This section implements subsections (k) and (l) of IC 13-18-3-2.